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A New Classification

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OF

Extra-Uterine Gestation.

presented by the author

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My only apology for selecting as my topic the subject that has just been announced, is the avowedly chaotic condition of its literature, which it seems to me renders justifiable an attempt to evolve therefrom a system and order. As we

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all know, ectopic pregnancy has but comparatively recently assumed the prominence in abdominal surgery that is now generally recognized, and with our growing knowledge of a pathological state that is unique in its relationship to the broad fields of obstetrics and gynecology, forming as it does the connecting-link between the two—a purely *obstetrical* condition demanding a purely *surgical* treatment—there has sprung up a vast amount of literature, much of which is but tautologic and but a small proportion of any intrinsic value. Having had occasion during the past few weeks to inquire into the question of the possible terminations of an extra-uterine gestation, I have endeavored, primarily merely for my own edification, to group the numerous pathological features that are from time to time revealed upon the operating-table, or at the bedside. The classification which I now offer is nothing more than a rational arrangement of phases of the disease that

are well-known to all surgeons actively engaged in abdominal work. The deductions that I have drawn seem to be legitimate—and I trust will bear further scrutiny.

Briefly, then, I find that in any given case of ectopic pregnancy, there are but three methods by which nature unaided can terminate such a gestation; these, enumerated in the order of their frequency, are: first, rupture with hemorrhage and frequently death; second, death of the product of conception, the so-called spontaneous cure; and third, continuance of the pregnancy to term.

Without entering into an elaborate study of these terminations and their respective pathological features, it becomes necessary to consider each separately for a moment in order to develop their various manifestations.

I. *Rupture.*—This, by far the most common termination of an ectopic pregnancy wherever situated, will, of course, in the

case of ovarian and abdominal varieties take place directly into the abdominal cavity; in interstitial pregnancy it may occur either into the abdominal cavity, into the layers of the broad ligament, or very rarely into the uterine cavity. The varieties of tubal rupture, while numerous, may be grouped into two main classes, namely, *external rupture*, including those in which there is complete rupture of the tubal walls as well as of the walls of the gestation-sac, and *internal rupture*, including those in which there is rupture of the walls of the gestation-sac only without coincident rupture of the tubal walls.

Under the first heading, external rupture, may be mentioned the following distinct sub-divisions, instances of which have been accurately reported by authentic witnesses. These are enumerated in about the order of the frequency of their occurrence:

(1). *Rupture of the sac-wall with pro-*

fuse hemorrhage into the abdominal cavity and speedy death. This is undoubtedly the most common form of rupture, its usual site being the upper and posterior portion of the tube. The hemorrhage is unlimited in this variety.

(2). *Rupture of the sac-wall with limited effusion of blood into circumscribed spaces between bands of inflammatory lymph.* In this form of rupture are produced the so-called *pelvic* and *abdominal hematoceles.* For many years these limited effusions of blood were unrecognized as bearing any relationship to a preceding ectopic gestation, and it has only been within the past decade that this truth has been positively demonstrated. The most common situation in which the hematocele is found is Douglas's cul-de-sac, where it constitutes the so-called *retro-uterine hematocele;* if, as rarely occurs, the blood accumulates in the vesico-uterine pouch, the condition is termed an *ante-uterine hematocele.* Other hemorrhagic accumulations have been

noted in the immediate vicinity of the broad ligaments, or wherever inflammatory adhesions may have formed between the pelvic or abdominal viscera.

(3). *Rupture of the sac-wall with effusion of blood into the meshes of the broad ligament.* This constitutes what has been termed *hematoma of the broad ligament.* The hemorrhage in this case is necessarily limited, that is, as long as the distended tissues of the broad ligament maintain their integrity. In many cases the pressure from the accumulated blood is so great that the thin layer of peritoneum yields, and the confined blood finds vent into the abdominal cavity (secondary abdominal hemorrhage). A fatal result often follows this accident.

In the second group, *internal rupture,* are likewise found a number of subdivisions, that are also presented in about the order of their frequency. These are as follows:

(1). *Rupture of a large vessel in the sac-wall with profuse hemorrhage into the gestation-sac itself and death of the embryo.* This condition is described by some writers under the term *hematoma of the sac.* Such an accident need not necessarily result fatally to the woman, but always results in the death of the product of conception. Usually it occurs early in gestation, and is therefore, as a rule, followed by absorption of the ovum.

(2). *Rupture of the outer or pelvic wall of the gestation-sac without coincident rupture of the tubal wall, with profuse discharge of blood into the abdominal cavity through the fimbriated extremity of the tube.* This rather rare termination of tubal pregnancy has been very appropriately termed by Bland Sutton, *tubal abortion.* The hemorrhage may be excessive and may be repeated at varying intervals of time until the excision of the tube.

(3). *Rupture of a large vessel with effusion of blood into the sac-walls themselves*

without penetration into the abdominal cavity or into the meshes of the broad ligament. This condition is known as *hematoma of the tube,* and is not, as a rule, accompanied by a profuse loss of blood. The ovum dies and undergoes a process of atrophy and partial absorption.

(4). *Rupture of the inner or uterine sac-wall with discharge of the contents of the gestation-sac into the uterine cavity whence they are expelled as in an ordinary abortion.* This, the opposite of tubal abortion, and which may be termed *interstitial abortion,* since it is possible for it to occur only in cases of the so-called interstitial or tubo-uterine pregnancy, is an exceedingly rare termination of tubal gestation, and is even claimed by many writers never to occur.

II. *Death of the Product of Conception.*—This event will be followed by varying results, according to the period at which embryonic death occurs. If this happens prior to the third month of gestation, there follows complete cessation of

the signs of pregnancy, with subsidence of any and all of the symptoms of the abnormal condition that may have been present. The ovum undergoes a process of absorption, and it and the gestation-sac may be entirely removed so that no trace of either as such can be found. There remains, however, a chronically diseased and distorted condition of the tube. This constitutes the so-called *spontaneous cure* of the extra-uterine gestation that is thought to occur in about one-third of the cases of this abnormal condition. Should embryonic death occur subsequent to the third month of pregnancy, as is the case usually in ovarian or abdominal pregnancy, and may exceptionally be noted in tubal gestation, such a termination as the preceding could not be expected. Under these circumstances there will follow an absorption of the liquor amnii with partial atrophy of the gestation-sac, while various changes, such as maceration, calcification resulting in the formation of a

lithopedion, mummification, adiposeration, or putrefaction, may take place in the fetus itself; or the entire gestation-sac may be converted into a large abscess-cavity, which may eventually rupture into the peritoneal cavity, the bowel, the bladder, or through the abdominal wall, subjecting the woman to all of the risks of septic peritonitis, septicemia and exhaustion from fetal and other fistulæ.

III. *Continuance of the Pregnancy to Term.*—This, when it occurs, usually takes place in an abdominal or ovarian gestation, although it is quite possible for a tubal pregnancy to be carried to term, the walls of the tube undergoing an enormous dilatation and the gestation-sac forcing its way down between the layers of the broad ligament to the pelvic floor, and then dissecting up the the posterior peritoneal reflection, behind which it continues to develop without interruption. Necessarily, this is an exceedingly rare termination of ectopic gestation. When it occurs the

woman falls into labor at the normal expiration of pregnancy, but owing to the abnormal circumstances the pains are ineffectual, gradually passing away, and a variety of missed labor results with its peculiar sequelæ.

As a *résumé* of the foregoing, permit me to tabulate these terminations of extra-uterine pregnancy as follows:

I. Rupture.
  1. *External*,
    (1). Into the abdominal cavity.
    (2). Into the abdominal cavity between bands of adhesions (*pelvic or abdominal hematocele*).
    (3). Hematoma of the broad ligament.
  2. *Internal*.
    (1). Hematoma of the sac.
    (2). Tubal abortion.
    (3). Hematoma of the tube.
    (4). Interstitial abortion.

II. Death of the Product of Conception.
  (1). Before the third month (*spontaneous cure*).
  (2). After the third month.

II. Continuance of the Pregnancy to Term.

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